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THE GENESEE FARMER.

SATURDAY, NOVEMBER 26, 1836.

USEFUL ARTS.

Plumbago or Black Lead.

This substance, which is used for various purposes in the arts, but is most generally known as the material for the common pencil, is found in many parts of the world; but the principal, and only very valuable localities, are Barrowdale in England, and Stubridge in Massachusetts. The mine at Barrowdale is private property, and only so much is taken from it annually, as will supply the market at certain rates, which amount to about £3000 a year. The quantity wanted is taken from the mine, which is then closed up until another year. The London price for pieces of the best quality, is 45s. per pound; the remainder is sold at 35s., but no addition can be made to the supply in market till another year. There are but seven or eight purchasers in the whole.

Pencils are of three kinds, the common, ever pointed, and what are called plummets. The latter are compounded of one-third sulphuret of antimony, and two-thirds plumbago. In making the common pencil, the cedar is first sawn into suitable pieces of the requisite thickness—then grooved by a fly-wheel to receive the lead. The lead is cut into thin plates to suit the groove, and after being introduced is scratched on the sides with a sharp instrument, which causes it to break exactly at the groove. The top is then glued on, and the pencils are rounded.

In making the ever pointed kind, the lead is first cut into plates, and then with a steel gage into square pieces. To round them, they are passed through three or four small holes, armed with perforated rubies, which last about four days. The hardest steel will not last for this purpose more than three hours.

In London six of these points cost about 50 cents; if cheaper than this, the purchaser may be assured they are adulterated. Genuine cedar pencils cost there 12 cents each. What in this country is frequently sold for black lead pencils, is nothing more than fuller's earth and vermicelli, mixed with a small proportion of plumbago. Such pencils can be sold as low as six or eight cents a dozen. Besides its use for pencils, plumbago is extensively used for manufacturing crucibles, as when properly prepared it resists the most intense heat—for mixing with grease to put on the axles of wagons, machinery, &c.—and it furnishes the best blacking for stoves of any substance yet discovered.

Tobacco an Antidote to Arsenic.

In the September number of Silliman's excellent Journal, is a communication from Professor Emerson of Andover, giving two instances in which cases of poisoning by arsenic had been successfully treated by tobacco.

The first was that of Miss Eastman, now connected with the orphan asylum at Troy, who took a quantity by mistake. The painful symptoms that followed led to a discovery of the alarming fact, and to produce vomiting as soon as possible, the use of tobacco was recommended by those present. It was tried by smoking, chewing, and a strong decoction, but there was neither nausea or dizziness, nor did it operate at all either as an emetic or cathartic. The painful sensations at her stomach, however, subsided, and she soon was well. The other case was one in which arsenic was given to a sick person by mistake. Tobacco was ordered, and though it had always been perfectly loathed, chewing and swallowing the saliva produced not the least sickness on the stomach. No other remedy was administered, and she recovered.

Should further experience show that a specific for this active poison has thus been discovered, it would furnish another instance of the wisdom of the Creator, in making things poisonous in themselves antidotes to those whose effect on life was more alarmingly fatal and rapid. G.

Description of Peas.

The following description of the different varieties of Peas, with their synonymes, from the Transactions of the London Horticultural Society, will be found of great use to Seedsmen, and be interesting to horticulturists generally. It was drawn up by Mr. George Gordon, under-gardener in the kitchen garden department. All the varieties of the pea have been grown in the Horticultural Society's garden, and they are arranged by Mr. Gordon into the following groups:

"I. *Common Dwarf Peas.* With small roundish pods, white peas and stems, not more than 3 feet high.

"II. *Common Tall Peas.* With round pods, white peas and stems, requiring sticks.

"III. *Dwarf Marrow Peas.* With broad pods, peas particularly sweet when young, and stems not more than 4 feet high.

"IV. *Tall Marrow Peas.* Like the last, but with stems requiring sticks.

"V. *Sugar Peas.* With pods destitute of the usual tough lining, and eaten like kidney bean pods: the peas white.

"VI. *Imperial Peas.* With the strong growth of the marrow, and the small round pods of the Prussian.

"VII *Prussian Peas.* With the stems branching very much, and roundish, not very large pods: the latest of any class.

"VIII. *Grey Sugar Peas.* With pods like those of the fifth class, but with flowers of a purplish color, and peas spotted, or any other color but white.

"IX. *Grey Common Peas.* With purple or white flowers, and peas any color but white.

"Group I. COMMON DWARF PEAS.

"1. *Bishop's Dwarf.*—About 2 feet high, and of strong growth. Pods short and broad, mostly containing 4 or 5 peas. Only a moderate bearer, a week later than the early frame, and hardly worth growing.

"2. *Early Dwarf.*—Height about 1½ feet, and somewhat resembling the preceding variety, but is more prolific; broad, mostly containing 5 peas. It is the best of the dwarfs, as it is very prolific, and of good quality.

"3. *Dwarf Brittany.*—About 6 or 8 inches high, of a dark green color, and of slender growth. Pods small and nearly round, mostly containing 5 peas. It is a few days later than the preceding, and is very fit for late sowing, as it is a good bearer.

"5. *Common Spanish Dwarf.—Synonymes:* New early Spanish dwarf, Spanish dwarf or fan, dwarf bog, Knox's dwarf.—About 2 feet high, and of strong growth. Pods rather broad, flat, and not very long, mostly containing 4 or 5 peas. A moderate bearer, and a few days later than Bishop's, which it somewhat resembles. Mr. Bishop selected his pea from this variety. (See *Gard. Mag.* vol. I. p. 127.)

"5. *Large Spanish Dwarf.*—About 3 feet high and very strong. Pods longer than the common Spanish dwarf, and round, mostly containing 5 or 6 peas. Like the preceding, only a moderate bearer.

"Group II. COMMON TALL PEAS.

"6. *Early Frame.—Synonymes:* Best early, early single blossomed, early double-blossomed frame, early one-eyed, double dwarf frame, single frame, early dwarf frame, superfine early, Batt's early dwarf nimble, early Wilson, Young's very early, early Nicholas, Perkin's early frame, early Nana, Mason's double-blossomed Russell's fine early, early French, dwarf Albany.—About 4 feet high, and rather slender. Pods small and round, mostly containing 5 or 6 peas. Very prolific, of excellent quality, and the earliest pea in the whole collection. The number of blossoms on this pea entirely depends on the soil and situation it is grown in. It must not be confounded with the early Charlton.

"7. *Early Charlton.—Synonymes:* Golden Charlton, early sugar frame, late dwarf, Twesly dwarf, Hotspur, Wrench's Hotspur, double dwarf Hotspur, early Hotspur, golden Hotspur, common Hutspur, early Nicholas Hotspur, Nimble Taylor, very fine late garden, Paddington, Essex Reading, Russell's early-blossomed.—About 5 feet high and of strong growth. Pods large, broad, and rather flattened, mostly containing 6 or 7 peas. A very prolific bearer, of excellent quality, and the best pea for standing the winter in the collection. It is about a week or ten days later than the early frame, and will continue much longer in bearing, and, like the preceding, varies in appearance according to soil, situation, &c.

"8. *D'Auvergne.*—About 5 feet high, and rather slender. Pods very long, nearly round, much curved, and tapering a good deal to the extremities, mostly containing 11 or 12 peas (if well grown) A very abundant bearer, of excellent quality, and later than the early Charlton, in coming into use. It is the best pea for produce, and deserves to be generally cultivated in all gardens.

"9 *Eastern Shore.*—About 5½ feet high, and rather slender. Pods small, short, and round, mostly containing 4 or 5 peas, a very abundant bearer; coming after the Charlton.

"10. *Tall Frame.*—About 5½ feet high, and rather slender. Pods small, round, and rather long; mostly containing 6 peas. Very productive, coming into use about the same time as the Charlton, to which it bears some resemblance, but is taller, and of slender growth.

"Group III. DWARF MARROW FAT.

"11. *Dwarf White Marrow.—Synonymes:* Glory of England, Wabash.—About 3½ feet high, and very strong. Pods broad, and not very long, of a

dark green color, containing 6 or 7 peas. Of excellent quality, but only a moderate bearer.

"12. *Knight's Dwarf Marrow.—Synonymes:* Dwarf Knight's, Knight's new dwarf.—About 3½ or 4 feet high, very much resembling the dwarf white marrow, but of stronger growth. Pods broad, and rather flat, containing 5 or 6 peas. Of excellent quality, and very prolific. The seed wrinkled when ripe.

"13. *Dwarf Green Marrow.—Synonymes:* New green, early dwarf green, early green, new early green, royal dwarf marrow, new green nonpariel, Holloway marrow, new extra green marrow, Wellington, green Rouncival.—About 4 feet high, and of strong growth. Pods dark green, large, broad, and flat, containing 7 or 8 peas. Of excellent quality, very prolific, and rather late. Peas a light green color, and sometimes half green and half white when ripe.

"Group IV. Tall Marrow Peas.

"14. *Tall White Morrow.—Synonymes:* Tall Carolina, large imperial marrow, new tall Temple, Clive, Wootten, large Carolina, white Rouncival —About 7 feet high, and of strong growth. Pods large, and very broad, containing 7 or 9 peas. Of excellent quality, very prolific and late. This is a very good pea for summer, but will not do without stakes.

"15. *Knight's Tall Marrow.—Synonyme:* Knight's late.—About 6½ feet high, and of very strong growth. Pods large and broad, containing 8 or 9 peas. Of excellent quality, and later than the preceding by a week. Peas when ripe shrivel very much, and are remarkably sweet. This pea is the best of all the tall ones for late sowing in summer.

"16. *Branching Marrow.—Synonymes:* Donn's new, prolific Isle of France.—About 5½ feet high, and of very strong growth. Pods large, broad, and rather flat, containing 8 or 9 peas, of excellent quality, large, and very prolific. Peas when ripe, of a yellowish green color.

"17. *Tall Green Marrow.—Synonymes:* Green tall, new large green, imperial green.—About 7 feet high, and of very strong growth. Pods large, broad, and rather flat, containing 8 or 9 peas, of excellent quality, late, and very prolific. Peas, when ripe, of a yellowish-green color.

"*Egg.—Synonymes:* Large egg or bean, Patagonian.—About 7½ feet high, and of a strong growth. It greatly resembles the tall white marrow, but the peas are much larger and not so round; in other respects nearly the same.

"19. *Waterloo.—Synonymes:* Nonpariel —About 6 feet high, and very strong. It has a great resemblance to the tall green marrow, but it does not grow so tall nor so strong. Peas green and rather wrinkled.

"20. *Pearl or Nonsuch.*—About 6 feet high, not of very strong growth, and bearing some resemblance of the tall white marrow, but the pods are rounder and much smaller. Of good quality, but a moderate bearer.

"21. *De Guiverigny.*—About 4½ feet high, of very strong growth, and resembles the dwarf white marrow, but much taller, and the pods are rounder; in other respects nearly the same.

"22. *Crown Pea.—Synonymes:* American crown, rose or crown.— About 5½ feet high, of very strong growth, with the blossoms in tufts at the extremity, somewhat like a crown (from which it derives its name). Pods small, round and straight, containing 4 or 6 peas. A very abundant bearer, of good quality, and very good for summer use.

"N. B. Nos. 20 and 22 should, perhaps, be referred to the second Group; but, on account of their strong growth, I have placed them in the 4th Group; they differ from it only in having small pods; and from the 2d Group in growing very strong, and being late.

"Group V. Sugar Peas.

"*Large Crooked Sugar.—Synonymes:* New pea, sugar pea, broad-sword, early Spanish.—About 9 feet high, and very strong. Pods very large, broad, and much twisted, containing 9 peas. Peas large, and very prominent in the pods. Of excellent quality, very productive, and the best in its class.

"24. *Vilmorin's Sugar.*—About 6½ feet high, and of slender growth. Pods small, round, and straight, containing 7 or 8 peas; which, as in all other sugar peas, are very prominent, even when quite young. Of excellent quality, and the greatest bearer in this class. It was received from M. Vilmorin as 'espece de pois tres-excellent.

"26. *Alberjas.*—About 6½ feet high, and of strong growth. Pods small, round, and straight, containing 7 or 8 peas. Of excellent quality, and very prolific. It was brought from Mendoza, by Dr. Gillies. There is sometimes a very thin skin inside the pods of this sort, which makes it distinct from all others in the class.

"26. *Tamarind Pea.—Synonyme:* Large dwarf sugar.—About 4 feet high, and of robust growth. Pods large, broad, and much curved, containing 9 or 10 peas. Of excellent quality, and a very abundant bearer. The pods are from 4 to 5 inches long, and are produced the latest in this class.

"27. *Early May Sugar.—Synonymes:* Early Dutch, early sugar, dwarf Dutch sugar.—About 4 feet high, and very slender. Pods small, round, and straight, containing 6 or 7 peas. Of good quality, but only a moderate bearer. This is the earliest pea in the collection, but is very tender, and will not do to sow before the beginning of March.

"28. *Dwarf Sugar.*—Ledman's dwarf.—About 3 feet high, and of very strong growth. Pods long, nearly round, and slightly curved, containing 7 peas. Of excellent quality, a moderate bearer, and late.

"29. *Dwarf Dutch —Synonymes:* Drawf sugar de Grace, early dwarf de Grace, dwarf crooked sugar —About 2½ feet high, and of slender growth. Pods rather short, small, and crooked, containing 5 peas. Of good quality, only a moderate bearer, and later than the preceding by a week.

"30. *Late Wyker Sugar.—Synonyme:* Late white sugar.—About 6½ feet high, and of very strong growth. Pods roundish, small, and much curved, containing 7 or 8 peas. Of excellent quality, a good bearer, and very late.

"N. B, The pods of all the peas belonging to the 5th Group should be gathered when quite young, like French [string] beans, and cooked after the same manner, without being shelled.

"Group VI. Imperials.

"31. *Dwarf Imperial.—Synonymes:* Imperial, blue imperial, dwarf green imperial, new long-podded imperial, Sumatra, green nonpareil, dwarf blue prolific, blue scimetar, sabre, blue sabre, new sabre, dwarf sabre.—About 4 feet high, and of strong growth. Pods large, long, and rather flat, much pointed, and containing 8 or 9 peas. Of excellent quality, a good bearer, and one of the best peas for summer, as it is very late coming into use.

"32 *Tall Imperial.—Synonymes:* Tall green imperial, tall blue imperial, Spanish patriot, new tall imperial, blue union, green nonpariel, tall Prussian or blue union.—About 7 feet high, and rather slender. Pods broad, and rather short, but not pointed like those of the preceding, and containing 6 peas in a pod. Of good quality, and very productive, but not so late as the last.

"Group VII. Prussians.

"33. *Blue Prussian.—Synonymes:* Dwarf blue Prussian, royal Prussian Blue, fine long podded dwarf, Prussian prolific, early Dutch green, green Prussian.—About 3½ high, and of strong growth. Pods long and rather round, containing 8 peas. This is so well know that it is quite useless for me to say any thing about its good qualities. It is undoubtedly the best for summer use, and one of the greatest bearers.

"34. *White Prussian.—Synonymes:* Prolific or poor man's profit, prolific, tall Prussian, dwarf white Prussian, new dwarf Norman, royal dwarf, royal prolific, dwarf Tewsley, Stowe pea.—About 4 feet high, and very robust. Pods broad, long, and rather flat, containing 7 or 8 peas, which are large and white, of good quality, and, like the blue Prussian, an excellent summer pea, and very prolific. This is the best sort for general cultivation, and well deserves the name of poor man's profit: but it will not remain so long in bearing as the blue Prussian.

"35. *Groom's Superb Dwarf Blue.*—About 18 inches high, and of robust growth. Pods large, round, and rather flat, containing 8 or 9 peas. Of excellent quality, a very abundant bearer, and a few days later than the blue Prussian, of which it seems a distinct dwarf variety. Raised by Mr. H. Groom, of Walworth, who sent seeds of it to the garden, in 1831. This deserves general cultivation, as it requires no sticking, and produces more on the same space of ground than any other of the dwarf sort.

Group VIII. Grey Sugar Peas.

"36. *Purple-podded Grey.*—About 7 feet high, and of robust growth. Pods short, broad, and rather pointed, of a deep purple color, containing about 5 or 6 peas. A good bearer: the peas, when boiled, are rather bitter; but, if cooked like the pods of the scarlet runner kidney bean, it is very good.

"37. *Red flowered Sugar.*—About 6½ feet high, and of slender growth. Pods long, nearly round, and straight, containing 6 peas. Like the preceding it is only fit for use when quite young. A good bearer.

"38. *Fishamend's Sugar.*—About 7½ feet high, and very robust. Pods very long, broad, and much curved, containing 8 or 9 peas, which are rather small, of a greenish-yellow color, dotted all over with small purple dots. A good bearer, and the best of all the sugar peas (except the large crooked sugar) for use when young.

"Group IX. Grey Common Peas.

"39. *Grey Rouncival.—Synonymes:* Giant Dutch.—About 8 feet high, and very robust. Pods broad, but not very long, and rather flat. Peas of a brown color, black-eyed, and spotted with yellow. A good bearer, but not fit for field culture.

"40. *Late Grey.—Synonymes:* Tall grey, tall Capucine, large grey —About 8 feet high, and very robust. Pods broad, but not very long, containing 7 or 8 peas of a yellowish brown color, black eyed, and large. A good bearer.

"41. *Maple Grey Pea.—Synonymes:* Marlborough, patridge grey.—About 7½ feet high, and very robust. Pods broad and rather long, containing 7 or 8 peas, which are like those of the preceding kind, but much smaller, and not black-eyed. This is a good bearer, and the flowers are much lighter colored than those of No. 40.

"42. *Spanish Marotta.—Synonymes:* Tall black-spotted marotta, black spotted.—About 6 feet high, and rather slender. Pods small, and nearly round, containing 7 peas, of a yellow color, black-eyed, small and round. It is very productive, and tolerably good if gathered when young, as it is by no means so bitter as the other grey peas when boiled.

"43. *Bean Pea.—Synonymes:* Funnell's black-spotted.—About 8 or 9 feet high, and very robust. Pods long, broad, and not much pointed, containing 9 or 10 peas, of a yellowish white color, black-eyed, and having some resemblance to small horse-beans when ripe. It is very productive, but only fit for field culture, as it is rather bitter when boiled, although not so bitter as grey peas in general.

Wheat.

It is a singular fact that most of the supplies of this species of bread stuff, for the New-York market, are at present received from Europe.—Last week the Stock of Dantzic and Bremen Wheat was about 15000 bushels; 6000 of which sold at 201 to 203 cents; the quality beautiful. This wheat cost in the European market only 90 cents, and after paying a duty of 25 cts., freight, and all other expences, will leave the importer a net profit of fifty per cent. It is truly wonderful that a wheat growing country like ours, should be indebted to the continent of Europe for bread. The supplies from the North River and the South are very small, which shows a great deficiency in the crop.—*Boston Traveller.*

Pennsylvania Husbandry.

Earthing Potatoes.—A very intelligent farmer from the valley of the Susquehannah, Union county, Pa., has stated to us verbally, some of the agricultural practices which prevail in his neighborhood, and which he is confident may be adopted with profit by others. One of these is raising potatoes without earthing. For this crop a young clover ley is preferred. The manure is drawn out and spread as the ground is ploughed, the potatoe sets are dropped in every third furrow, and of course covered with the next furrow slice. The ground is afterwards harrowed, and the crop kept free from weeds, by the harrow or cultivator, and hoe, *but the plants are not earthed.* The plough is only used in gathering the crop. Another mode is to draw shallow furrows, at the distance intended for drills, drop the seed, and cover by gathering two furrows upon the seed. The intermediate spaces are ploughed when the crop is first dressed, and turned in equal parts towards the adjoining drills. The soil is a sandy loam.

We have practiced the first mode, except that our crops was earthed with a plough; and we are persuaded, that had we left a plane surface, the crop would have been benefitted—for three reasons; first, because by earthing with the plough the seed was too deep, 10 or 12 inches, and could not receive the genial influence of heat and air; second, because the crop suffered more from drought in consequence of the sharp ridges into which the surface had been moulded, than it would had the surface been left flat; and third, because the plough, by throwing a portion of the manure and sod to the surface, diminished the fertility of the ground. Our ground was partly in a moist swale, and partly on a sandy knoll. The crop in the swale gave at the rate of more than 600 bushels to the acre product; while that on the knoll, a severe drought having intervened, gave less than 300 bushels. The whole was highly manured.—From this experiment we infer, that on damp and stiff soils, it will be best to deposit the seed near the surface, and to earth the plants with the plough; that where the soil is light and dry, the seed should be planted deeper and the plants not earthed. By earthing the plants, it will be perceived, that double the surface is exposed to the drying influence of the sun, than there is where the ground is left flat. Ridges correct the defects of a wet soil, and they increase the evils of drought on a dry one.

Clover.—The practice, says our informant, is to mow clover only one year, as cattle food, and then to turn it under as food for the crop—thus ensuring the return to the soil of a mass of rich vegetable matter. Clover is a biennial plant, and of course cannot be depended upon as a *green crop* after the second year; and as this constitutes the main dependence for winter forage, the timothy not being grown, it cannot be depended on, after the second year, *for hay.* Hence clover is not only sown with small grains, but in the Indian corn grounds, at the last dressing of the crop—the corn not being hilled. The latter practice is found highly advantageous, and is being extended.

We can add our own experience in favor of sowing clover with small grains. It is our general practice; and we find we are doubly paid in the autumn feed, and quadruply paid in the feed and manure which the green crop returns to the soil. The clover not only imparts fertility, when turned under, but its roots divide and break the soil while growing, and render it pulverous when they decay. In sowing clover designd for a green crop, and indeed in all cases where it is to constitute the only herbage, at least ten pounds of seed should be used to the acre. The thicker the plants the finer and better the herbage; the more abundant the roots, the greater benefit to the soil, both as it regards pulverization and fertility.—With regard to the utility of seeding cornfields, the only doubt we have, is, whether the clover would acquire sufficient strength to withstand our northern winters. As it would be sown in July, about the time we put in our ruta baga, we are inclined to think it would acquire sufficient maturity While on the subject of clover, we will state our belief, resulting from experience, that it may be profitably grown on stiff soils and marsh land, providing they have been sufficiently underdrained—the only impediment to its growth on such soils being watered upon the soils or sub-soils, within the reach of the roots.

Sheep in Corn.—Our informant states it to be a good practice to *turn sheep into the corn fields,* after the last hoeing in July. They will not eat or injure the corn, but will eat the grass which springs up. The corn affords the shelter which those animals require, and serves to protect them from the fly, which is vexatious, and often seriously prejudicial to them, during the hot weather of August. But for the high respectability of our informant, we should be disposed to doubt the utility of this practice.—*Cultivator.*

Agricultural Establishment at Moegelin,

IN PRUSSIA.

About twelve or thirteen years ago, the King of Prussia, who, like his uncle, was always anxious to extend and improve the agriculture of his dominion, invited Von Thaer, who resided near Lunenburg, and whose celebrity was even then great, to settle in his kingdom, to assist in diffusing agricultural knowledge, and, by his management, set an example to the other great landed proprietors, which might stimulate them to adopt similar improvements. His majesty also wished him to conduct a seminary, in which a knowledge of the science might be applied to husbandry, for the instruction of the young men of the first families.

The state of Moegelin was given to him to improve and manage, as a pattern farm. It consists of eighteen hundred Berlin morgens or about twelve hundred English acres. At that time the annual value was estimated at two thousand rix dollars,* but is now supposed to be worth twelve thousand; but some part of that increased value has arisen from the buildings that have been since erected. The principal improvement, that of the soil, has risen from the large flocks of sheep, which in summer are folded on the land, and in winter make abundant manure, in houses constructed for their lodging.

The Royal Institution, of which Von Thaer is the director, and which occupies a considerable portion of his extensive buildings, has three Professors besides himself. One for Mathematics, Chemistry, and Geology, one for Veterinary knowledge: and a third for Botany, and the use of the different vegetable productions in the Materia Medica, as well as for Entomology. Besides these, an experienced agriculturist is engaged, whose office it is to point out to the pupils the mode of applying the science to the practical business of husbandry. The course commences in September. During the winter months, the time is occupied in mathematics, and the first six books of Euclid are studied; and in the summer, the geometrical knowledge is principally applied to the measurement of land, timber, buildings, and other objects. The first principles of chemistry are unfolded. By a good, but economical apparatus, various experiments are made, both on a large and small scale. For the larger experiments, the brew-house and still-house, with their respective fixtures, are found highly useful.

Much attention is paid to the analyzation of various soils; and the different kinds, with the relative quantity of their component parts, are arranged with great order and regularity. The classification is made with neatness, by having the specimens of soil arranged in order, and distinguished by different colors. Thus, for instance, if the basis of the soil be sandy, the glass has a cover of yellow paper; if the next predominating earth be calcareous, the glass has a white ticket on its side; if it be red clay, it has a red ticket; if blue clay, a brown one. Over these tickets, others of a smaller size indicate, by their color, the third greatest quantity of the particular substance contained in the soil. This matter may appear to many more ingenious than useful, and savoring too much of the German habit of generalizing. The classification of Von Thaer is, however, as much adopted, and as commonly used on the large estates of this country, where exact statistical accounts are kept, as the classification of Linnæus, in natural history is throughout the civilized world.

*A rix dollar is seventy-five cents.

There is a large botanical garden, arranged on the system of the Swedish naturalist, kept in excellent order, with all the plants labelled, and the Latin as well as the German names. An herbarium, with a good collection of dried plants, which is constantly increasing, open to the examination of the pupils, as well as the skeletons of the different animals, and casts of their several parts; which must be of great use in the veterinary pursuits. Models of agricultural implements, especially of ploughs, are preserved in a museum, which is stored as well with such as are familiar in Germany, as with those used in England or other countries. I remarked the absence but of two things used in this country, viz: the mole plough, and a new machine for sowing small seeds. The first of these would certainly be of little use in most parts of Germany; and the other is so new, that, excellent as it is, its adoption is by no means general, even in England.

The various implements used on the farm are all made by smiths, wheelers, and carpenters, residing round the institution; the work-shops are open to the pupils; and they are encouraged, by attentive inspection, to become masters of the more minute branches of the economy of an estate.

It appeared to me, that there was an attempt to crowd too much instruction into too short a compass; for many of the pupils spend but one year in the institution; and thus only the foundation, and that a very slight one, can be laid in so short a space of time. It is, however, to be presumed, that the young men come here prepared with considerable previous knowledge, as they are mostly between the ages of twenty and twenty-four, some few appeared to be sill older:

The sum paid by each pupil is four hundred rix dollars annually besides which, they provide their own beds and breakfast. In this country, such an expense precludes the admission of all but youths of good fortune. Each has a separate apartment. They are very well behaved young men; and their conduct to each other, and to the professors, was polite even to punctilio.

As I have not had an opportunity of visiting Hofwyl, and have met with no account of that Institution, written by any person who is well acquainted with many details on the subject of its agriculture, I cannot make a comparison between that widely-blazoned establishment, and the unostentatious Institution of Moegelin. I was indeed told that the plan and effects were far inferior; but as my informants were Prussians, I make some allowance for the national vanity, which felt itself piqued that the establishment in Switzerland should be praised most highly, and their Royal Foundation not be known beyond the boundaries of the kingdom to which it belongs.—*Jacob's Travels in Germany.*

Hogs

May be kept in a thriving condition through the winter on apples; it may be well to mix with them a little bran, peas, potatoes, wash, or any thing that is convenient. It is much better to put the apples in a cold shed, or in some place where they will continue frozen, than to put them in the cellar where they will decay. We heard a person who kept his hogs mostly on apples through the winter, observe that apples which had been frozen and then warmed for hogs were prefered to sound apples taken from the cellar. So it appears to be much better to save apples in a frozen state. It saves trouble in carrying them into the cellar, saves expense in cooking, as freezing and thawing will cook them, and it saves many apples which would rot in the cellar. —*Yankee Farmer.*

COMMUNICATIONS.

Letter from Berkshire.

Extract of a letter from a subscriber in Richmond, (Mass.) dated Oct. 31, 1836:

We had our first frost, whose visitation was wofully portrayed in the damage it inflicted, about the 10th of September. It was, however, very partial in the distribution of ruin, in which it so much delighted to traffic, choosing neither the more elevated nor depressed territories as the field of its operations, but asserting its little empire here in the valley, and another there on the hill, as much as to say, I come to give premonitory warning that these hills and valleys soon shall be *all my own*, and shall be held in durance to my will by fetters which the sorrowing winds of winter will but strengthen, and which nothing but the warm rays of Sol, as he returns from his southern pilgrimage, and the kind breezes of spring, can dissolve. The effects of this frost were more visible on the valleys of the Housatonic in Pittsfield, than they were in Sheffield or Barrington, and often we saw its ravages in one part of a field, while another, perhaps but a few feet distant, retained the verdure of June. This difference was probably, in some instances, owing to a difference of soil, as when a bed of mucky land was met by a sandy soil, and in other cases, a fog might have come over the part which remained uninjured, and thus have protected it. In some cases fields of corn were spoiled, though in general this was not *wholly* the case. Potatoe tops were mostly killed, and nearly all kinds of running vines, though by the by these have been very scarce the past season, pumpkins, melons and cucumbers having experienced an early failure. With the luxuries that the two former kinds afford we reluctantly part, but as for cucumbers, we can safely say that our loss of *them* was more than compensated by a good crop of healthful tomatoes, which we find of as easy culture, and of far more salutary consequence than themselves. We recommend to *all* who have never done it, (those who have will not neglect,) to lay in *well* for them next year, and test their qualities.

From the frost until the 25th of the month the season was as fine as could be desired, for it surely partook of the richness of autumn mingled with the softness of summer. The sunshine was as warm, and the showers as soft, as ever fell upon the rosy bosom of fertile June. The 19th of the month we think to have been one of the warmest days of '36, and there were others which almost sued for an affinity with kindlier midsummers than the last has been.

From the 25th the weather was colder, and on the morning of the 30th, if our recollection is right, the ground for the first time this season was covered with snow, but "like the early dew," it was soon gone, scarcely a vestage of it remaining at 10 o'clock. When we have such early snow falls we usually expect warmer weather, but in this case we were disappointed.

Oct. 5, the first day of our cattle show, the wind blew like a hurricane from N. E. until about 11 o'clock A. M., when it commenced raining in torrents, and continued to do so until nearly sunset. Consequently the day was very severe —notwithstanding which, men and animals were present from remote parts of the county. The show of animals, although they were thus sadly "driven by the wind and pelted by the rain," was superior to any thing of the kind ever exhibited in "old Berkshire," and indeed we doubt whether any county in the Union can produce 200 head of cattle, to say nothing of other animals, superior to a like number which were congregated at that time. The list of premiums awarded you have received through the hebdomadals of this county—of course we shall not repeat them. Though the competition was close, we think them judiciously awarded. The show of sheep was in perfect keeping with that of the cattle. We had specimens from many flocks, all good, but from those exhibited, we would recommend to those who wish to improve their flocks, to notice Messrs. Colts' and Lee's of Pittsfield, and Werden's of Richmond, all of which were of superior quality.

From the swine assembled, it is evident that they are subject to the improvements of the age, as the advances they have made will testify. Formerly their representatives on similar occasions were mere "*land sharks*," which were always disturbing us by their boisterous vociferation. But now we have our modest and tidy Chinas, Grass-fed and Berkshires, (English,) of which last named we expected to see a delegation from the establishment of Mr. Bement of Albany. We regret exceedingly that the gentleman disappointed us, by detaining the interesting embassage at home, and hope he will not treat our court, which we mean hereafter shall be respectable, with similar contempt on future occasions. We heartily approve the zeal with which he is disseminating them through the country, and hope he will live, not only to see them possessors of the land, but will receive a full recompense for his labor in their behalf, for they are actually the hog of our choice.

The show of domestic manufactures was not as extensive in quantity as on former times, but of superior quality. Probably the defect in quantity was owing to the inclemency of the morning, which doubtless prevented many articles from coming in. The Society partook of an excellent dinner at Fields' Coffee House.

The morning of the 2d day of the Fair, (which was a cold raw day,) found the earth wrapped in a light mantle of snow, but the zeal for the ploughing match, however, was not abated. Thirteen teams, seven of horses and six of oxen, were entered; each toiled for the prize in presence of a great multitude. Though the field of labor was in some respects unfavorable, "the work done was well done."

At 11 o'clock, the Society formed a procession at Messrs. Warriner & Russel's Coffee House, and moved to the old church, where kindred rites had been performed, successively, for the last 25 years, to close the public exercises in thanksgivings which the occasion so warmly prompted, and to award to the successful candidates the prizes which they had so nobly won. The music from the choir, under the direction of Mr. Lucas, was performed in elevated strains, which apparently had "less of earth in them than heaven." So sublime, so melting and soul-subduing did they fall upon the audience, that it seemed as if some angel band had condescended for a moment to come down to assist in offering a festive song of praise. Truly there is something very sweet, very charming in music, but in devotional music it is peculiarly so. Still, with what indifference do we see it performed in some of the churches of our country; and what excuse can be given for it when its effect is of so exalting and refining a character.

The prayer was offered by the Rev. Dr. Shepard, of Lenox, in his usual style of deep and heart-felt piety, breathed out in the eloquence of devotion. It was the voice of thanksgiving for the innumerable blessings which flow in like a vine upon the inhabitants of this county, and of supplications for those blessings which we need to make us a grateful and happier people. At his close, we are sure no one could help *thinking* at least, "surely my lines have fallen in pleasant places, and we have a goodly heritage."

The address of Mr. Bishop was perfectly in keeping with what his talents might lead us to expect. It was just what it should be, and was given in a style of pure and unfeigned eloquence. The orator did not, as some have done on similar occasions, go on to point out the excellencies of the farmer's profession, and the enviableness of his condition, compared with that of those in other walks of life, but like a sound hearted, practical man, he talked of the duties and trials incident to a farming life, that though he had done much to advance himself and his calling, much remained undone—in short, that his life must be one of constant watchings, studies and struggles, and closed by recommending strongly the love of country which should ever characterize the owners of the soil.

After leaving the meeting house, which was filled to overflowing, the Society returned to the Berkshire Coffee House, and partook of an excellent dinner, after which it met for the choice of officers for the ensuing year, and at an early hour retired to prepare for new harvests, and of course a new anniversary.

October has been a cold month, enough so to be called December. On the 12th, snow fell with all the violence of winter. Cattle and sheep were gathered to the barns, and sleighs were as busy as in their most busy season. The snow remained in spots for near two weeks.

Produce retains its high prices. Wheat flour $10 50 per barrel, rye $1 25 per bushel, corn do., oats 56 cts., buckwheat 92½ cts.; beef $4 and $5 per cwt. Yours, &c. W. B.

The Prospects of the Farmer.

BY A FARMER.

At no time since my commencement of the management of a farm have the prospects of the farmer appeared more gloomy than at this moment. There was a very general failure of the wheat crop in this state last harvest, owing to the ravages of the fly, which were induced by the weakening effects of a severe winter. In this situation, farmers who generally raised little more than enough for their bread and seed, find that their hopes of the crops of next year are likely to fail. For a number of years there has been a gradual change in the time of sowing wheat, until the general period had become about the last of the 9th and beginning of the 10th month. But the destruction of the crop by the

insect led to a considerable change the present fall in the time of putting in the winter crop. It was very generally delayed until about a week or ten days in last month. The early cold weather has kept the grain from growing, and in many instances from coming up, and now, at the very time of my writing, the 12th of the 11th month, our wheat-fields look almost as bare as the day they were sowed. In this state of things it is quite reasonable to conclude, that the chance of the present crop must be very poor indeed. There is no probability *now*, that the winter grain will gain such a head as to warrant even an ordinary yield, except in such locations as abound in land exceedingly fertile. With such a prospect before us, the agriculturists of this neighborhood find it expedient to employ every means that may be suggested of saving their grain, and the practice of feeding fruit to stock has become general in some parts of this county. Farmers find that their horses and cows do well on this kind of feed, and that their hogs will actually fatten on apples. I have now on hand 7 hogs of good size, which have yet had nothing else fed to them. They are now all in good order, and several of them as fat as any which I ever killed. By this management I shall be able to save my corn crop almost entirely this season.

In this state of things, when we are endeavoring to make the most of our produce, we have an enemy among us who, in defiance of our entreaties, is carrying on the work of desolation and destruction. The *Distiller* is at this time doing incalculable mischief! We have yet in the very heart of our county men who pursue this diabolical business, and it is said they derive considerable profit from the manufacture of their liquid fire! I very much fear that our country will yet be overwhelmed in a tide of misery brought on by this destructive business, if more efficient means are not employed to avert its course.

A FARMER.

Bucks county, Pa.

From the Ohio Farmer.

Location, Soil, and Cultivation of the MADDER CROP.

A location facing the south or south-east is to be preferred. A sandy Loam not over stiff and heavy, or light and sandy, or a good brown, deep, rich upland Loam, free from foul grass, weeds, stone or stumps of trees. Where a crop of potatoes, peas, corn or wheat, has been cultivated the past season, plough deep twice, once in September and once in October, and if rather stiff let it lie after the plough until spring. When the spring opens, and the ground has become dry and warm, (say in Tennessee, 1st of April, Ohio, 15th, and New-York, 25th to 1st of May; I speak of the spring of 1836.) Plough again deep, the deeper the better, then harrow well and strike it into ridges with a one horse plough, three feet wide, and four feet vacant, or making a ridge once in seven feet, raising it, if on rather moist ground, eight or ten inches, and dry land six or eight from the natural level, then with a light harrow level and shape the ridges like a well formed bed of beets, &c.

We will suppose you intend to plant one acre of ground, and that you have purchased eight bushels of top roots in the fall and buried them like potatoes on your premises—count the ridges on your acre, and take out of the ground one bushel of roots and plant it on one-eighth of your ridges; you will then be able to ascertain how to proportion your roots for the remainder.

The following is the manner of planting, cultivating, &c., when the quantity of ground does not exceed three or four acres. One person on each side of the ridge to make the holes, (plant four inches below the surface of the bed, or thereabouts, when covered,) one on each side to drop the roots, and one on each side to cover, pressing the hill like that of planting corn, or three persons on one side, as the case may be, whether you have one or more acres to plant. Let the owner be the dropper of roots, and his most thorough assistance behind him. Make the holes from twelve to eighteen inches apart, and about six inches from the edge of the ridge. As the plants are supposed to have been purchased in the fall, the roots may have thrown out sprouts, and possibly have leaved. In this case, in dropping and covering, you will leave the most prominent sprout or sprouts a little out of the ground, as where a plant has leafed it ought not to be smothered.

WEEDING.

When the plant gets up three or four inches weed with the hoe, and plough with one horse between the ridges or beds, but not on them; this will take place 2 or 3 weeks after planting. When up 12 or 15 inches, many of the tops will fall; assist them with a ten foot pole; two persons cross them each way across the bed, cover them with a shovel or garden rake, throwing the soil from between the ridges.—After loosening with the one horse plough, you will, with a shovel, scatter the earth between the stalks rather than throw it into heaps; of course we wish to keep the stalks separate, as they are to form new and important roots in the centre of the beds. About the 20th of June you may plough between the beds, and scatter more earth on the fresh tops, (all but the ends) and when you get through you may plant potatoes between the beds if you choose. I do not recommend it if you have plenty of land, although I raised 1070 bushels of Pink Eyes on eight acres the first year, and 60 bushels of corn. If your land is perfectly clear of weeds, you are through with your labor on the Madder crop for this year, except in latitudes where there is not much snow, and considerable frost; in this case cover in October two inches or thereabout. 2d year; same operations in weeding, but no crop between; cover once in June. 3d year; weed only; 4th year; weed in the spring, if a weedy piece of ground.

Begin to plough out the roots in Tennessee, [3 years old] 1st Sept. Ohio, [4 years] same time. N. York, 15th or 20th, after cutting off the tops with a sharp hoe. In ploughing out the roots use a heavy span of horses, and a large plough. We ought to choose a soil neither too wet or too dry, too stiff or light. Shake the dirt from the roots, and rinse or wash, as the soil may be, stiff or light; dry in a common hop kiln; grind them in a mill after Wilson's Patent Coffee Mill; this mill weighs from one to two pounds. The madder mill may be from 60 to 80 lbs. weight. Grind coarse and fan in a fanning mill; then grind again for market. The profit of this crop is immense; the exhaustion of soil trifling, and glutting the market out of the question.

The Editor of the Albany Cultivator, Vol. 2, page 20, says—"It is principally cultivated in Holland, the province of Zeland being literally covered with it, from whence it is exported to every part of Europe and America, yielding almost incalculable profits. The imports of this article for the use of our manufacturers, is said to amount in value to more than two millions of dollars annually." Mr. Jefferson, while minister in France, writes: "They cultivate madder here at immense profits; they dig it once in 5 or 6 years." I have before me a communication from a cultivator of the article, (see Cultivator, Vol. 2, page 93,) who makes the clear profit to amount to $888 30 on an acre once in four years. The lowest amount of profit that I have known on an acre in four years is $300; the highest 1200; this last included the sale of top roots for planting. The amount will vary according to the soil and cultivation. I have unquestionable evidence that one hill (2400 to the acre) has produced in five years, 4 lbs. of kiln dried madder; another at five years old, 6 lbs.; another wherein they took uncommon pains with the hill, 8 lbs. 8 oz.—Mr. Woodbury, of Winfield, Herkimer county, N. Y., the writer of the above mentioned communication, purchased in the fall of 1834 one-fifth of an acre of madder four years old and planted in hills, (far less productive than if planted in ridges,) for which he paid $20, and dug from it one thousand one hundred pounds. After it was kiln dryed he sold it for 18 cents the pound. The usual yield for four years old is 2 lbs. to the hill, where the land is first rate, and the cultivation is performed by a snug farmer. The crop increases in something like the following ratio, viz: 1st year small growth. 2d, double. 3d, equal to the two first. 4th, equal to the whole. 5th, equal to 75 per cent on the whole; at least this is my opinion, not having dug any that was five years old. Madder grows, and the stalks are fresh, in any of the middle or western States until killed by a hard frost, and is almost the first vegetable that starts in the spring, hence I should suppose that madder in Tennessee, at three years old, would be equal to four years at Birmingham, Ohio; four and a half, Oneida county, New-York; five years, Winthrop, Me. The cultivators of Holland and France, from whom we draw most of our supplies, and most of the agricultural authors of those countries, have been silent on the subject.

I am located in the rich bottoms of the Vermillion river. I, in connection with another person, plant this spring 10 or 12 acres. As I have always been of the opinion that a madder soil should be composed in a great degree of decayed vegetables, I think I shall get in four years from 5000 to 6000 lbs. of dried Madder per acre. I have a good upland 1½ acres, planted some time since, from which I can spare enough roots next fall, to plant 6 or 7 acres. The price will be, in the fall, for 6 bushels, $24; over 6 and under 12 bushels, $3 50 per bushel; over 12, $3.

Birmingham is 38 miles west from Cleveland, Ohio, and 14 miles south-east from Huron, Ohio. Messrs. Wickham & Co., Forwarding Merchants, Huron, will be applicant's agents, to whom funds may be forwarded for the purchase of roots; P. E. & E B. Bronson, Birmingham, owners, or R. Bronson, manager. All letters on the subject must be post paid, to meet with attention.

I had been in the practice of using the 'Rubia Tinctorum, or Dyer's Madder,' for many years previous to embarking in the business; and before I commenced, I ascertained that the price of the imported article was worth (the preceding thirteen years, on an average, in the New-York market,) 15 cents per lb.; the ten years preceding the thirteen years, it was worth 25 cents, and in that time have known it worth 44 cents. In my early communications to Editors of agricultural papers, I stated the crop would equal 2000 lbs., 3 years old, but did not dream that 4 years would produce an average of 4000 lbs. on good land and good culture. The cost does not exceed 4½ cts. per lb., exclusive of selling top roots for planting. They may be sold with profit at three years and even two years old.

It is surprising to me that no more than sixty acres is as yet under cultivation. There will be about one hundred acres planted this spring, and from forty-five thousand to seventy-five thousand acres wanted for the consumption of the United States, and England, as she annot g row the article imports all she uses. I say she cannot grow it to advantage; her summers are too moist and cool. It is more absurd to let foreign nations export madder to this country, than to let them export wheat or wheat flour. It is more hardy than the potato crop. It is worth 3 cents more per pound than the best imported. As a proof, no imported madder can be sold where this has been kept for sale. The difference consists in this, that the brightest roots are selected in the field in those countries, dried and ground, and sent to England. They use it in dyeing their Adrineple, or Turkey red, on cotton; the rest dried, (without rinsing) ground, and sent to America. In this country a prudent cultivator rinses, dries and grinds altogether; then fans or separates the

loose bark and small fibres from the pure article. The refuse is used for ground of many colors.

Madder is used in whole, or part, for the following colors on wool, both in England, France, and America, viz: blue, black, red, buff, olive-brown, olive, navy blue, and many others; finally it produces one of the most beautiful, durable, and healthy colors that is at this time dyed; as for calico printers, it enters greatly into their dyes. The town of Lowell, in Massachusetts, uses thirty thousand dollars worth per year. A war with France would raise the article to 31 cents per lb. in the New-York market. One small establishment in Otsego county, New-York, uses equal, each year, to three-fourths of all that is raised in the Northern States at this time.

The reader will now inquire why have not the farmers, in the United States, entered into the culture of this article, and completely glutted the market? I will answer, that most of them want their profit at the expiration of each year, not thinking that the horse or ox is four years old before it is profitable to sell. But there is another difficulty. I have before observed that there was wanting, for the consumption in the United States, from 45 to 75,000 acres. The amount of Madder roots, for planting, dug last fall, was 1000 bushels. There will be planted this spring, say something more than 100 acres; next fall there will be for sale, roots amounting to 250 bushels, and next year enough to plant 200 acres. Probably it will take ten years or more, to procure a supply of roots to plant, equal to the consumption of 1835—6 or 7. I have before me a communication from a respectable correspondent, detailing the mode of cultivation in Holland and France, together with queries, requesting my answers, which I will most cheerfully give, and which will be forwarded to be inserted in your paper, should you deem the above worthy of publication.

I have, for many years past, believed that the soil and climate of Ohio, was peculiarly favorable to the culture of silk, madder, and the grape for making wine; and having resided here in course of the last and present years, several months, I have been more and more confirmed in that opinion. What hinders this State from rising in rank above New-York? Let every farmer take an agricultural paper, and improve the privileges that nature has given them. I have examined the soil and privileges of this county in particular, and do not hesitate to say, I believe that it equals any part of the United States. There is, I believe, no desirable fruit or grain that grows north of Philadelphia, but what flourishes here. It is certainly a most desirable soil and climate, compared with that of the middle counties of New-York. Many of the farmers of this section, only skim the surface of the land with the plough. What hinders the water, in the spring and fall, from settling in the ground through the sub soil, and bursting out in springs?—Shallow ploughing. What hinders the farmer from obtaning thirty bushels of wheat to the acre?——Shallow ploughing. I wish I were able to committ to paper all I feel in favor of manual labor, or agricultural schools, backed by numerous agricultural papers, containing communications from a Buel, a Coleman, and a host of other scientific and practical farmers. I am not a practical farmer, in a large way, myself, but the aid I have received from perusing those papers, for a few years past, has been of great benefit to me—yes, ten times the expense of four agricultural papers per year.

Not being brought up on a farm, how could I exercise judgment in the selection of a horse, ox, sheep, or hog? I read the communications of writers of acknowledged reputation on the subject, and compared their arguments with my own reason, improved by previous reading, and made my choice. How should I be able to select and cultivate the various grains and grasses, or to till the ground to a proper rotation of crops, or select and engraft with my own hands the best fruits in the country, and last, though not least, to have a good garden?

I might go on and multiply reasons why I will patronize agricultural papers; but knowing my inabilility to do justice to the subject, and fearing your readers will think I am fishing for some particular individual, I will conclude with wishing you, and your brethren in the cause, many subscribers, and that you will consider me one of them.

R. BRONSON.

Birmingham, Huron co., O.
April 3, 1836.

Great Product and Use of Rutabaga.

Mr. R. Gordon, in a communication published in the *Farmer and Mechanic*, states that he, last year, raised from an acre of ground, planted in Ruta-baga, 1510 bushels of that fine root; that he expended on it 30 days labor. But this is not the most pleasing part of Mr. Gordon's experiment in the *culture* and *use* of this nutricious product of the earth. He tried the experiment of feeding two yoke of working oxen. To the one yoke he allowed two bushels of Rutabaga in the same time that the other yoke consumed a bushel of corn; and he is entirely satisfied that two bushels of Rutabaga is better than half that quantity of corn for working oxen or other neat stock. This experiment of Mr. Gordon's corresponds with most of those which have been made by other feeders, in Europe and in America. A prejudice exists against the culture of the Ruta-baga in this country, with many farmers; but why it should *exist*, we know not, unless it be,—1st. because the method of cultivation is different from the mode pursued generally with the other varieties of the turnip—2dly. because among the first plans suggested, was that of transplantation by *dibbling*, a plan of culture too *monstrous* for the advocates of the good old ways of their grandfathers, even to think of contemplating, much less acting upon. The truth is, there is no mystery about the culture of the root. It may be successfully raised in the same manner of other turnips; but we believe the best way to cultivate either, is by *drilling*, whether regard be had to *product*, or the saving of labor and manure.

Mr. Gordon raised 1510 bushels from an acre, and for the purpose of feeding working oxen, or other neat cattle, proved that *two* bushels of this root, is *better* than *one of corn*; now let us for argument sake, presume it is as good, and that, instead of 1510 bushels being produced on an acre, 500 bushels may, with proper manuring and culture, be raised thereon. That this quantity may be raised we do not in the least doubt, and thus believing, we will not stop to make the calculation here, as to *saving*, but shall leave that to the farmer to do at his leisure for himself. But we would respectfully remark, that, if the Rutabaga will answer for the feed of working oxen, we can see no possible reason why it will not answer equally well for working horses also.

In England many distinguished farmers do feed it to them, with the addition of a little bran of some sort, and salt sprinkled over the roots, cut into pieces sufficiently small to be eatable by the animals. At first, it is said, some horses will reject such feed, but after a few trials become not only used to, but passionately fond of it. The culture of this root does not require more labor than that of corn, and if ten or twenty times the quantity can be grown on the same space of ground, we would ask those who are in the habit of sustaining their cattle through the winter on *corn*, to stop for a few minutes and calculate how much they would save, by substituting the Rutabaga in its place.

From the Farmer & Gardener.

Economy of Provender.

A subscriber in Frederick county, Md., having addressed to us the following request, contained in the subjoined extract of a letter, we shall after giving it a place, proceed to state our views upon the subject to which he has called our attention.

"I have a large stock of cattle, and to keep them in good condition during the winter, and carry them through on the feed I have provided, will require it to be fed to the best possible advantage. My feed consists of corn fodder, hay, straw, ruta-baga, and turnips. Would it be travelling out of your way to give us, in an early number of your paper, a good plan of feeding. I have thought of getting a straw-cutter, and feeding proportions of hay, or fodder and roots mixed, but my neighbors laugh at me and say it will be expense for nothing, as our old plan is best—however, as I have 35 head of horned cattle to winter, and in the old way it will require a large quantity of feed to keep them well, if you thought it would pay one, I would get a straw cutter and try your plan of feeding."

In the first place, so far from considering it as "travelling out of our way," to reply to any queries which our subscribers and other agriculturists may deem proper to submit to us, we would respectfully state it always imparts pleasure to us to respond to all such calls.

Our correspondent observes, that from the large number of stock he has on hand, it will require him to feed out the provender he has provided to the best possible advantage,—and he asks us to submit such a plan as will best comport with a just economy of his feed.

We might comprise our advice in a very brief rule—we might say, "cut your long feed, as *hay, straw, corn-stalks, blades, tops*, and *roots*, of all descriptions, and steam them:"—but the generous spirit of inquiry which seems to pervade the mind of our correspondent and subscriber, imposes upon us the pleasing duty of indulging somewhat in detail, with respect to the manner of arriving at the desired goal, and the advantage arising from *cutting* all long feed. In England nearly all the large stock-proprietors use their hay and straw only when cut, and many of them add the labor of steaming to that process, and find their *interest* in so doing. In this country also, we are happy to find that the "*old plan*" is falling into disuse, by many of our most intelligent agriculturists.

Our correspondent says, that his neighbors laugh at him, when he talks of getting a cutting box, and insist that the old plan is best. Our advice is *to let those laugh that win*, and as a set off to their facetious dispositions, we would remark, that in Mexico, where the *wooden* spade has been used for centuries, it would be more than a man's life would be worth to attempt to introduce one made of *iron*; but this imperturbable adherence to the prejudices of ages—this reverence, without wit or reason, for the customs of other days does not prove that the latter instrument is not incomparably superior to the former; nor does it prove that the neighbors of our correspondent are right, in adhering to the old-fashioned way of wasting fully one-third of the long feed which they give to their cattle.

Does any man doubt that one-third of all the hay, fodder and tops, that are given to cattle are wasted? If he do, let him go to the cow-yard, and his doubts will be removed. But it may be said—"What is not eaten is given to the dung heap." True; but then, in a period of scarcity, like the present, when there is no certainty that there will be a plentiful supply for either man or beast, the question should not be, "how much provender shall we give to the manure heap?" but as our correspondent impliedly puts the question—"how shall it be fed to the best possible advantage?"—and in despite of the "*laugh*" of his neighbors, we will reiterate the assertion—that by cutting his long provender he will save fully one-third, nay, we will go further and say, that by steaming it when cut, he will save at least *two-fifths*, or in other words, that the same quantity which, on the old plan, would sustain *three* head of cattle, will support *five*, and that the five will be in better health and condition generally. We are a great advocate for the accumulation of manure by every possible process, consistent with the just and well understood principles of enlightened economy; but although we have uniformly recommended the gathering of leaves and all sorts of refuse vegetable matter, with a view of adding to the quantity which is made on a farm in the customary way, we hold it that the best *alembic* for converting *food* into *manure*, is the stomach of the animal.

Let any farmer go into his cow-yard or stable

any morning in the week, and examine for himself, and if he do not find that fully the amount of provender, which had been given to his stock the over-night, as assumed by us, has been wasted, then we will acknowledge our error. Let us see the effect of our plan. By *cutting* and *steaming corn-stalks, corn-tops, straw* and all other kinds of long feed, it is not only rendered palatable, easy of digestion, but every avenue of *loss* by *waste* is cut off.

"Ah! but it is very laborious to cut so much provender!" we think we hear the advocates of the "old plan" ejaculate—and we fain would ask them, if they can tell us what is the amount of all this so much dreaded *labor*? And here we would further ask to be permitted to answer the question ourself. A *Cylindrical Straw-cutter*, which will cost $30, propelled by hand power, will cut in a day from 300 to 500 bushels, according to the industry and physical capacity of the hand engaged in the labor,—so that with a proper *economy of time* all the *cutting* could be done by the hands, when they could not do out-door work—thus taking away from the plan we recommended, nearly all the difficulty, which, in the opinion of the advocates of the "*old plan*," it is enveloped.

To show the advantage which will result, we will subjoin Mr. *Benjamin Hale's* account of the savings made by him in the use of straw-cutters, employed to cut hay and straw as fodder for horses. This gentleman was at the time proprietor of a line of stages, running between Newburyport and Boston. This statement was submitted by him, to the Board of Trustees of the Massachusetts Agricultural Society, who were informed by Mr. Hale, that he used no more grain from October, 1816, to April, 1817, than was used from April, 1816, to October, 1816.

[Mr. Benjamin Hale's account of the savings made by the use of straw-cutters, employed to cut hay and straw as fodder for horses.]

The whole amount of hay purchased from April 1, to Oct. 1, 1816, six months, and used at the stage stable was 32 tons, 4 cwt., 0 qrs., 10 lbs., which, at $25 per ton, was $800 00

From Oct. 1, 1816, to April 1, 1817, whole amount of hay and straw purchased for, and consumed by, the same number of horses, viz.

	T.	cwt.	qrs.	lbs.	cost.
Straw,	16	13	3	10	$160 23
Hay,	13	14	1	00	350 00

$510 23

Deduct amount on hand Apl. 1, 1817, 4 tons more than there was Oct. 1, 1816, at $25 per ton 100 00

410 23

Saving by the straw-cutter at Newburyport, $389 77

Whole amount of hay used for the horses of the Salem stage, 25 in number, from April 1, to Oct. 1 1816, viz:

	tons.	cwt.	qrs.	lbs.	
	22	0	0	0	$660 00

	T.	cwt.	qrs.	lbs.	cost.
Straw,	15	13	0	0	$187 80
Hay,	2	15	0	0	81 00

268 80

Saving in using chopped fodder five months, $391 20

RECAPITULATION.

Saving in using the straw-cutter 9 months, viz:

At Newburyport,	4 months,	$389 77
At Salem,	5 "	391 20

Total saving in 9 months, $780 97

Here is a fact which is worth all the theories in the world; but the *saving* was not carried as far as it ought and might have been; for if the grain fed had also been reduced to *meal*, fully one third of the quantity fed out during these nine months might have been saved, as it is an incontrovertible truth, that two-thirds of the usual quantity of corn or oats, fed in the unbroken grain, will, when reduced to meal, answer a better purpose than when the whole quantity is given, as before premised.

The suggestion which our *Correspondent* makes of his intention of cutting his roots and mixing them with his hay, fodder and straw, when cut, is an excellent one, and will render his food most acceptable indeed to his cattle.

We hope he will not stop in merely *cutting* and *mixing* his long and root provender; but that he will carry his enlightened experiment still further, and submit his feed when thus prepared to the action of steam. If he has no suitable fixtures and is indisposed to get them, let him prepare a long box with a tight cover, and by simply pouring on boiling water and closing the lid, he may, without much expense, secure to himself much of the advantages of steaming.

While we are upon this subject we would remark, that those who feed their horses with *corn*, should by all means cause it to be crushed in the ear, and thus render the *cob*, as well as the *kernel*, an eatable substance; and should they apply the mass thus made to the action of steam, they will find that the same quantity of *kernel* and *cob* will answer for the feed of a horse, as is now given of the *kernel* alone.

Harmony Society.

This society, consisting of emigrants from Germany, was formed in 1805 by George Rapp, who has since been its spiritual and temporal leader. In their religious and secular concerns, they are a kind of intermediate sect between the Shakers and Moravians, partaking of the peculiarities of both, but identified with neither. They hold their lands and other property in common, but live in distinct families, and regard the relations of husband and wife, parent and child, &c. Marriage is not forbidden, but as it is considered unfavorable to the general interests of the community, is consequently discouraged. Their first location was in Butler county, Pa., where they remained ten years, and then removed to a tract of fine country on the east bank of the Wabash river, in Indiana, fifty-four miles below Vincennes, and upwards of one hundred above its confluence with the Ohio. Here they also remained ten years, and then sold their possessions to Robert Owen, the famous founder and advocate of a novel theory called 'The Social System,' and who on the 4th of July, 1826, promulgated his well known declaration of 'mental independence.' The consideration of the conveyance from Mr. Rapp to Mr. Owen was $190,000, with which, and the members of his society, he removed to Economy, their present location.

Economy is situated in Western Pennsylvania, on the right bank of the Ohio river, 18 miles below Pittsburgh. Its present population is about 500 souls, mostly German, and the possessions of the society consist of a large amount of real and personal property. They have about 3000 acres of land, mostly in a high state of cultivation. Their ordinary crops are about 4000 bushels of wheat—the same of Indian corn—3000 bushels of rye—5 or 6000 of oats, and 1000 of barley. They cut upwards of 500 tons of clover and timothy hay, and feed about 200 neat cattle of superior size, mostly of the Devonshire and Durham breed. They also keep about 40 horses and 1300 sheep. The sheep are of the Merino and Saxony breeds; but they are introducing the Bakewell and South Down breeds, considering them preferable on account of their size, and weight of fleece. They have ten acres devoted to the cultivation of the vine, and annually make about 40 barrels of wine, which sells at $1 25 a gallon. They also make about 175 barrels of currant wine for domestic use, and as a substitute for ardent spirit, of which they use none, except for medical and manufacturing purposes. They cultivate several varieties of the grape, among which are the Madeira, Burgundy, Cape, Isabella, Catawba, Sweet water, Tokay, &c. The process of cultivating the grape and making the wine, we reserve for another article.

Their manufactures are also in a flourishing condition, and embrace the more common fabrics from wool, cotton, and silk. In the manufacture of broadcloths, sattinets, flannels, and blankets, they consume about 100,000 lbs. annually. Their manufacture of cotton is limited to yarns and sheetings, and their annual consumption of the raw material is about 300 bales. They have within a few years engaged in the culture and manufacture of silk; but that department of their manufactures is yet in its infancy. They have, however, full confidence in its practicability and profit, and are extending their operations. They have already about 10,000 White mulberry trees, from one to eight years old, and some of the Morus multicaulis, and other varieties of the Chinese mulberry. They fed the last season, about 500,000 worms, and made about 90 lbs. of silk.—Their silk manufacture is as yet confined to vestings, lustrings, handkerchiefs and sewing silk, which is done on machinery of their own make. They have one Jackquard loom for figured vestings, and several other hand looms. The specimens of satins and cravats they gave us, are decidedly the best we have seen of American manufacture, and are pronounced by competent judges to be equal to foreign. They heat the water in their cocoon basins, and operate their reeds by steam. They have also numerous mechanics, such as shoe-makers, hatters, turners, blacksmiths, wagon-makers, mill wrights, carpenters, tanners, &c.

Their village is situated directly on the river, and contains about 110 dwelling houses, a church, hotel, and store. They have a post office, and daily mail from Pittsburgh and Cleaveland, Ohio. They have also a good school, library, and one of the best museums of natural curiosities and cabinets of minerals, in the United States,—a small printing press, and an excellent band of music, &c. &c.—*Silk Culturist.*

Lindley's Guide to the Orchard and Fruit GARDEN,

CONTAINING notes, explanatory and practical, with numerous additions on the propagation, culture, pruning and training of standard, open dwarf, and espalier fruit trees, adapted to the climate of the United States of America, with additions of the most valuable American Fruits, and other matters useful to the American horticulturist, by M. Floy, Gardener and Nurseryman, New York.

For sale by REYNOLDS & BATEHAM, at the Rochester Seed Store. nov 26

DURHAM CATTLE.

I WISH to sell my thorough bred improved Durham Short Horned Bull ROMEO, and Cow FANNY BOLIVAR, (with a Calf by her side.)

PEDIGREE OF ROMEO AND FANNY BOLIVAR.

ROMEO,

Red and white, calved in May, 1834; got by Cherry; dam Fanny Bolivar.

FANNY BOLIVAR.

Red and white, calved Dec. 16, 1829, bred by Thomas Williams of Chelsea, near Boston; got by the imported bull Bolivar; dam the imported cow Flora. Flora, calved in 1817, got by La Fourne's bull; dam a full blooded Durham Short Horned cow by Comet. Bolivar, "the sire of Fanny Bolivar," bred by Mr. Whitiker in England, imported by Col. Powell of Philadelphia.—See Herd Book, 2d vol. p. 24, No. 804.

CHERRY, "the sire of Romeo," was got by Lucifer out of Beauty, Lucifer got by Dishley, (a thorough bred Durham bull, imported in 1821 by Geo. Brintnell, Esq. of New Jersey,) out of the imported Durham cow Cherry, and got by Lancaster, who was sold in 1818 for 621 guineas. Cherry was got by a son of Comet, dam by Marsk; Marsk was got by Favorite, the sire of Comet; Lancaster was got by Wellington, and Wellington by Comet. Lancaster's dam, Moss Rose, out of Red Rose, by Favorite; dam by Favorite; gr. dam by Ben; g. gr. dam by Foljambet; g. g. gr. dam by Hubback. Beauty, the dam of Cherry, imported by De Wolf, was got by Samson out of a full bred Durham cow. Samson was got by Ossian, and Ossian by the celebrated old Comet.

I also have several half and three-fourth blood, which are fine. A. RAYNOLDS.

Rochester, Nov. 22, 1836. nov 26-f4t

100,000 White Italian Mulberry Trees,

OF one to four year's growth, for sale at Gasport, Niagara co. by J. TIMERMAN.

Study of Agriculture.

We select the following paragraphs from an Address delivered before the Middlesex (Mass) Agricultural Society, by Albert H. Nelson, at its anniversary in October last. The New-England Farmer says of this address—"Much as has been before written and said on the advantages, which practical Agriculture derives from Science and Book Knowledge, we have seen nothing which more clearly, forcibly, and demonstratively inculcates the importance of the union of these two principal sources of modern improvements in husbandry."

There is an unwarrantable prejudice existant in the minds of most farmers against what they call "Book farming." When mentioned, a smile is excited; when one is bold enough to avow his determination to farm in that way, he is greeted with an open laugh. "Experience—experience—you must learn by experience, it is said. That alone is worth any thing: that alone will prevent you from failing, or will ensure you success. Your farm must be your book—and your ploughs, your hoes, and your teams, the letters by which you read out your lesson." Now certainly experience is not to be despised; it cannot be too highly praised. But it is put in opposition to scientific husbandry by those who argue in this way: and let us examine what this bugbear may be. We say that a man is a book farmer, when he takes books written on the subject of agriculture, and farms according to the principles, and performs the experiments, therein contained Book farming, then, is another name for the science of farming: it is an exact description of the art, written down in letters. It is the collected wisdom of the best cultivators of the earth: it is the noted result of experiment; the detail of theory confirmed. In a word, it is a history of the developement of the principles of farming, from the first imperfect effort of ignorant and insolated means up to the present time. Now farming is a science as much as is geometry: and it is a knowledge of its principles which makes a man a good farmer. A knowledge of these principles can only be obtained by experience, but this experience can be taught in books, and is so taught. So that, after all, we find that a scientific, or book farmer does practice on experience: save that he takes the experience of the whole world, through all time, instead of taking that of his immediate neighbor: and instead, untaught and ignorant, of his own.

We may learn the principles of farming, then, by study, and why in the name of common sense may we not study books? Why should we be obliged to grope along, to stumble on in the thick darkness which our ancestors have exerted themselves successfully to dissipate, when we may walk firmly and surely, would we but open our eyes. To illustrate my meaning. A young man comes into the possession of a farm composed entirely of light sandy soil. His predecessors have from year to year raised, by dint of much labor, a small crop of burnt up hay, a small crop of potatoes, and smaller crop of stinted corn. Now shall he toil on all his days, ploughing, sowing and chopping the same fields, in the same way, and with the same results, as did his ancestors? Or would it not be far better for him to farm a little by book? To study the nature of calcareous and silicious soils, to learn the different effects and qualities of manures, to introduce the turnep and clover culture, and a rotation of crops; and thus by the aid of a little science, double his produce and the value of his land at the same time? Shall he continue to cultivate certain articles without any regard to their adaptation to his soil, or shall he study the nature of the soil somewhat? Can there be a doubt as to what should be done? Our fathers work with their eyes wide open, I allow. They adopt improvements as fast at they are made in their neighborhood so that they can see them: but they adopt *only* when they can *see* them. New modes of cultivation, and new articles of culture, are in this way gradually introduced. But they are introduced too slowly. The work does not go on fast enough. They do not keep up with the improvements of the age. There is much hesitation and doubt, after the time for hesitation and doubt has passed. The good old way, with all its imperfections, is adhered to in preference to a newer and better, merely because the one is old, and the other new. Our farmers have a thorough contempt for any new things, and especially if promulgated by a book farmer, and in this way loose great advantages. Illustrations of this fact are abundant. How much writing, and argument, and persuasion, it has cost to obtain for the cultivation of the mulberry, and the making of silk, their present, partial, and limited confidence. How slowly has the cultivation of Ruta Baga been progressed; and how much more slowy the raising of Lucerne. How hard it is for people to give up keeping a little mountain of soil around each hill of corn; how hard to use the roller and cultivator; how hard to give up cross ploughing! or to illustrate this same feeling in a different way, it was forty years after Spinach was introduced into the gardens of the opulent, before it could be bought in Boston market; and I doubt not but that there are those present who now hear its name for the first time. The Rhubarb was twenty years in coming into favor; the Tomato, the best of all summer vegetables, nearly as long; and the Salsify is now hardly a regular marketable vegetable. While the Sea Kale of Great Britain has not been able to tempt a single cultivator, Head Lettuce as well known as it is, is seldom raised in the country, and the Cauliflower more seldom still. "But the disgrace of being slow to receive valuable novelties, is not confined to our farmers and gardeners alone. The Medical Faculty of Paris, proscribed as poisonous the potato, one hundred years after that plant had raised millions of vigorous troops who under Marlborough had again beaten the finest armies of France.

I know that prejudices may arise; that many false speculations will be indulged, and false theories promulgated. But these are evils which are incident to a free examination of this or any subject. Certainly this can be no reason for our rejecting the aid of science altogether, or for abandoning all inquiry. We are not to take every thing we find in a book which pretends to treat of any matter scientifically, as entirely true. We must investigate and we must study. Practical skill alone may be sufficient for the ordinary business of the farmer; but it is not sufficient to enable him to avail himself of all the advantages which his situation may present. To enable him to rise above every obstacle which chance may throw in his way, and to prepare him for untried difficulties, experience and speculation must be considered. Every important fact cannot be discovered by experience alone. Many important facts lie hidden and concealed, and require the aid of science to detect them. There are certain things easily discovered; certain axioms that every one knows. The light of science is not wanted to tell us of common things; that our land must be kept rich, and free from noxious weeds, and that men do not gather grapes from thorns or figs from thistles. But the different qualities of soils—the different qualities of manures, and advantages and disadvantages of different crops, and different modes of cultivations, these cannot be perfectly understood, save by the light of science; save by study; and acquainting ourselves with all the improvements that are made and making.

To say that our farmers are opposed to a regular study of the science of agriculture, because they dislike mental labor, would be libelous.—Their whole course of life disproves such an assertion. Everything but this they study, and with their whole soul and strength. This subject alone, anomalous as it may seem, they do not study: they are content to trudge on in the timeworn footsteps of their ancestors, in comparative ignorance of the very matter which most concerns them. One would think that a man who earns his bread by tilling the soil, would wish to know something of that soil. Dependent on the produce of the earth, one would think that he would wish to know how to get the most of it, and would institute experiments to that end. One would think that in these days, when the farmer is asking the use and nature and philosophy of everything above, and on, and below the earth, he would sometimes ask the nature and use and philosophy of the earth itself. But is this the case to any considerable degree? Put this man into any other business, and he will immediately seize his books, and try to make himself acquainted with all that has been written on that subject. Attention has been excited as to this matter, I know. Improvements have been made, and are making. The study has been commenced, as is evidenced by institutions like this, the anniversary of which we are now celebrating, and by the improved appearance of our farms. But the objection is, that the study is not general; that improvements do not go on fast enough. How few farmers there are that actually study the nature of soils and manures, and crops? How few make any improvements save those they see instituted by their nearest circle of neighbors? All such they are willing to make. Now I ask, and the question contains the gist of the whole matter, why a man may not as well learn from the results of his neighbors' experiments and science, when stated in a book, as when seen on a farm? Extend this same principle. Great men, practical men, in every part of the world, and for many years, have investigated the subject of agriculture, and have written on it; their plans and experiments, as well successful as otherwise, have been noted: experiments have been properly instituted. Now if a farmer may learn from a book written by his neighbor, may he not much more learn from this collected wisdom of the whole world? Do not men learn in this way? Is it not a fact, and may we not point to shining examples from the members of this society, that those who have studied books and become book farmers, are the best farmers, and have the best and most productive farms? Being willing to learn from those men, as we all are, and thus from books second hand, and why are we not willing to go ourselves to the fountain head, and thus become pioneers in the cause?

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sept 3

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